Attachment B

FOCUS AREA B: SURVEILLANCE AND EPIDEMIOLOGY CAPACITY

Focus Area B is organized into two parts:

I. Public Health Surveillance and Detection Capacities
II. Public Health Epidemiologic Investigation and Response Capacities

Each Focus Area includes **Critical Capacities**, which are the core expertise and infrastructure that should be implemented as soon as possible to enable a public health system to prepare for and respond to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies. Some of the **Critical Capacities** include **Critical Benchmarks**, which recipients are required to complete prior to submission of the work plan (see Notice of Cooperative Agreement Award). Further, some **Critical Capacities** have associated with them **Activities That May be Considered**. Though not exhaustive, these lists provide examples of related activities that applicants may propose to develop to augment the relevant **Critical Capacity.**

For each **Critical Capacity,** the work plan must provide: (a) a brief description of the existing capacity in your jurisdiction, (b) an assessment of whether this capacity is adequate, and (c) where you judge the capacity inadequate, a proposal for effecting improvements during this budget period--including a timeline to guide implementation, measurable milestones to facilitate accountability, and a proposed budget. **This document should not exceed 5 pages.**

Some Focus Areas also include **Enhanced Capacities**, which are the additional expertise and infrastructure--i.e., over and beyond the **Critical Capacities**--to enable public health systems to have optimal capacities to respond to bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies. **Enhanced Capacities** should be addressed only after Critical Capacities have been achieved or are well along in development. Recipients are encouraged to choose among these suggested activities or propose other comparable ones.

For each **Enhanced Capacity** that the recipient chooses to address now, the work plan must include a brief proposal for effecting the intended enhancements during this budget period--including a timeline to guide implementation, measurable milestones to facilitate accountability, and a proposed budget. **This document is not to exceed 5 pages.**

III. PUBLIC HEALTH SURVEILLANCE AND DETECTION CAPACITIES

Recipient Activities:

D. CRITICAL CAPACITY: to rapidly detect a terrorist event through a highly functioning, mandatory reportable disease surveillance system, as evidenced by ongoing timely and complete reporting by providers and laboratories in a jurisdiction, especially of illnesses and conditions possibly resulting from bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies. (See Appendix 6, I.T. functions #1-6.)

1. Prepare a timeline for developing a system to receive and evaluate urgent disease reports from all parts of your state and local public health jurisdictions on a 24 hour per day, 7 day per week basis.
(CRITICAL BENCHMARK #8)

2. Ensure legal authority to require and receive reports on and investigate any suspect cases, potential terrorist events, or unusual illness clusters.

3. Routinely assess the timeliness and completeness of your reportable disease surveillance system, especially for naturally occurring illnesses and conditions mimicking those resulting from a terrorist action.

4. Ensure the existence of systems to provide ongoing disease surveillance and epidemiology training for public health, clinical, and other healthcare professionals and to develop subject matter expertise within the public health system. **(LINK WITH FOCUS AREA G)**

5. With the input of local public health agencies, evaluate and improve the timely and complete reporting of outbreaks of illness and/or key categories of cases of reportable diseases, such as influenza, invasive bacterial diseases, vaccine preventable diseases, vectorborne diseases, and food- and waterborne diseases.

6. Assess capacities associated with monitoring dermatological conditions/rash illnesses and develop plans to improve this component of the surveillance system.

7. **Activities that may be considered**:

   a. Ensure sufficient epidemiologic staffing capacity to manage the reportable disease system at the state and local level.

   b. Ensure the competence of that staff by providing necessary supplies, equipment, and training in epidemiology, surveillance, and interpretation of clinical and laboratory information. **(LINK WITH FOCUS AREAS C AND G)**

   c. Educate and provide feedback to reporting sources in your jurisdiction

about notifiable diseases, conditions, syndromes and their clinical presentations, and reporting requirements and procedures, including those conditions and syndromes that could indicate a terrorist event. (See Appendix 6, I.T. functions #6-9.**)**

d. Develop or enhance reporting protocols, procedures, surveillance activities, information dissemination, or analytic methods that improve the usefulness of the reportable disease system.

e. In coordination with local public health agencies, apply information technology according to established specifications, and including NEDSS development or the NEDSS Base System to develop or enhance electronic applications for reportable diseases surveillance, including electronic laboratory-based disease reporting from clinical and public health laboratories and linkage of laboratory results to case report information. (See Appendix 6, I.T. functions #1-5.) **(LINK WITH FOCUS AREAS C AND E)**

f. In coordination **with your public health laboratory, develop the capacity to apply molecular epidemiologic methods (e.g., pulsed field gel electrophoresis or sequence-based methods) to outbreak investigations and surveillance as appropriate. (LINK WITH FOCUS AREA C)**

g. In coordination with your public health laboratory, develop and implement a strategy to ensure laboratory testing (in clinical or public health laboratories) for rapid or specific confirmation of urgent case reports. (See Appendix 6, I.T. functions #1,4,and 5.) **(LINK WITH FOCUS AREA C)**

B. ENHANCED CAPACITY: to rapidly detect and obtain additional information about bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies through other core, cross-cutting health department surveillance systems such as vital record death reporting; medical examiner reports; emergency department, provider, or hospital discharge reporting; or ongoing population-based surveys. (See Appendix 6, I.T. functions #1-4.)

1. Develop or enhance the capacity to rapidly add questions and analyze survey results in the aftermath of a bioterrorist attack.

2. Enhance the timeliness and completeness of a system (death reporting, for example) through electronic reporting to detect or respond to a terrorist attack. (See Appendix 6, I.T. functions #1-5.)

3. In coordination with local public health agencies, develop surveillance activities, system enhancements, and analytic methods for improving the system's usefulness for providing information relative to terrorist events. (See Appendix 6, I.T. functions #1-5.)

4. In coordination with local public health agencies, use NEDSS development or the NEDSS Base System to develop or enhance electronic applications for access to and use of these core, cross-cutting systems by appropriate staff. **(LINK WITH FOCUS AREA E)**

5. Assist in the provision of sufficient, competent, trained staff to manage the system at the state and local level. **(LINK WITH FOCUS AREA G)**

C. ENHANCED CAPACITY: to rapidly detect and obtain additional information about bioterrorism, other infectious disease outbreaks, or other public health threats or emergencies by accessing potentially relevant pre-existing data sets outside the health department, or through the development of new active or sentinel surveillance activities.

1. Develop and evaluate surveillance to rapidly detect influenza-like illness (ILI) and distinguish possible bioterrorism-caused illness from other causes of ILI.

2. Develop active, laboratory-based surveillance for invasive bacterial diseases (for example, *N. meningitidis, B. anthracis, Y. pestis,* and other causes of sepsis or meningitis). **(LINK WITH FOCUS AREA C)**

3. Develop and evaluate surveillance for encephalitis and meningitis or unexplained critical illnesses or deaths. Link clinical reports and laboratory test results. **(LINK WITH FOCUS AREAS C AND E)**

4. Develop and evaluate surveillance for indicators of terrorist events, including hospital admissions, hospital beds occupied (or available), intensive care unit admissions, or emergency department visits.

5. Evaluate existing databases (for example, data kept by medical examiners/coroners, emergency responders, poison control centers, 911 systems, pharmacies, clinics, and veterinarians) for use in surveillance systems.

II. PUBLIC HEALTH EPIDEMIOLOGIC INVESTIGATION AND RESPONSE CAPACITIES

Recipient Activities:

C. CRITICAL CAPACITY: to rapidly and effectively investigate and respond to a potential terrorist event as evidenced by a comprehensive and exercised epidemiologic response plan that addresses surge capacity, delivery of mass prophylaxis and immunizations, and pre-event development of specific epidemiologic investigation and response needs.

1. Assess current epidemiologic capacity and prepare a timeline for achieving the goal of providing at least one epidemiologist for each Metropolitan Statistical Area (MSA)with a population greater than 500,000**.**
(CRITICAL BENCHMARK #9)

2. Ensure that a full-time response coordinator for bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies has been designated at the appropriate state and/or local levels.

3. With local public health agencies, coordinate all epidemiologic response-specific planning in this section with your jurisdiction's overall planning conducted in Focus Area A, and with hospital preparedness activities being facilitated by the Health Resources Services Administration.

4. Train state and local public health staff who would respond to a bioterrorism event in their roles and in the specifics of your jurisdiction's plan. **(LINK WITH FOCUS AREA G)**

5. Ensure the performance of risk and vulnerability assessments of food and water to include assessments of production, processing, and/or distribution facilities.

6. Activities that may be considered:

a. Develop and train epidemiolgic response teams capable of conducting field epidemiologic investigations, rapid needs assessments, exposure assessments, and response activities.

b. Establish a secure, Web-based communications system that provides for rapid and accurate reporting and discussion of disease outbreaks and other acute health events that might suggest bioterrorism. Include provision for multiple channels for routine communications (e.g., Web, e-mail) and alert capacity for emergency notification (e.g., phone, pager) of key staff. (See

Appendix 6, I.T. functions #6-9.) **(LINK WITH FOCUS AREA E)**

c. Provide and evaluate bioterrorism epidemiologic response training for state and local public health agency personnel, healthcare providers, policy makers, law enforcement officials, and others who would be involved in responding to an event.

d. Develop or acquire information and fact sheets about bioterrorism, other infectious disease outbreaks, other public health threats and emergencies, and other relevant technical information for public use in a terrorist event. **(LINK WITH FOCUS AREA F)**

e. Conduct bioterrorism sessions at key meetings and conferences of outside organizations involved in epidemiologic detection and response, for example, the Association of Practitioners of Infection Control (APIC), infectious disease societies, and healthcare practitioners.

f. With local public health agencies, identify physicians and other providers with key bioterrorism-related skills (for example, those who have seen and treated smallpox).

B. CRITICAL CAPACITY: to rapidly and effectively investigate and respond to a potential terrorist event, as evidenced by ongoing effective state and local response to naturally occurring individual cases of urgent public health importance, outbreaks of disease, and emergency public health interventions such as emergency chemoprophylaxis or immunization activities.

1. Achieve an around-the-clock capacity for immediate response to reports of urgent cases, outbreaks, or other public health emergencies, including any events that suggest intentional release of a biologic agent.

2. Assess the adequacy of state and local public health response to outbreaks of disease and other public health emergencies.

3. Assess and strengthen links with animal surveillance systems and the animal health community.

4. Activities that may be considered:

a. With local public health agencies, ensure

sufficient staff to respond to urgent cases, disease outbreaks, and public health emergency interventions at the state and local level.

b. With local public health agencies, ensure the competence of that staff by providing necessary supplies, equipment, and training in epidemiology, outbreak investigation, interpretation of clinical and laboratory information, public health control measures, communications systems, and management of secure information.

c. With local public health agencies, educate, especially in the context of real-life situations, key policy makers, partners and stakeholders in your jurisdiction regarding the nature and scope of public health investigation, response and control.

d. With local public health agencies, develop or enhance case investigation protocols, response procedures, legal or regulatory provisions, or communication and information dissemination that improve the effectiveness of the public health epidemiologic response.

e. With local public health agencies, evaluate and improve the timely and effective response to key case of urgent public health importance (for example meningococcemia), outbreaks of disease, and urgent public health interventions such as IG administration following group exposure to hepatitis A or mass immunization in a meningococcal epidemic.

f. Participate in CDC's Epidemic Information Exchange Program.

g. Participate in interactive communications capabilities such as CDC's Epidemic Information Exchange Program. (See Appendix 6, I.T. Functions #7-9.)

h. With local public health agencies, apply information technology to enhance response capacity (for example, workflow tracking and monitoring systems; field data entry, analysis, and transmission; management of case contacts; and delivery of immunizations and chemoprophylaxis information. (See Appendix 6, I.T. Functions #5,6 and 9.)

C. ENHANCED CAPACITY for effective response through the creation or strengthening of pre-event, on-going working links between health department staff and key individuals and organizations engaged in healthcare, public health, and law enforcement.

1. Regularly provide relevant public health information to key partners through an appropriate Web site and/or a jurisdiction-wide newsletter.

2. Enhance relationships with infection control professionals through development of a formal public health network or support of state activities that build relationships between the health department and the Association of Professionals in Infection Control.

3. With local public health agencies, enhance relationships with infectious disease physicians by participating in infectious disease rounds and conferences, supporting an infectious disease society or network, or supporting a health department-based infectious disease fellow. **(LINK WITH FOCUS AREA G)**

4. With local public health agencies, enhance relationships with emergency department providers and emergency responders by attending and participating at conferences, developing and evaluating surveillance activities, or engaging in NEDSS-related activities for development of electronic systems for emergency department reporting. (See Appendix 6, I.T. functions #1-2.)

5. With local public health agencies as appropriate, enhance relations with medical schools, nursing schools, and schools of public health through joint sponsorship of conferences, teaching, assisting in curriculum development and offering health department electives to students and residents. (LINK WITH FOCUS AREA G)

6. With local public health agencies, enhance relations with law enforcement agencies, the business community, and the National Guard by establishing designated points of contact and through cross-training in each discipline and/or joint sponsorship of conferences.

CDC Activities:

A. Provide expertise in monitoring impact and course of outbreaks after they have been identified.

B. Provide technical assistance in planning and implementing program activities, particularly in the following areas and compatible with the IT Functions and Specifications:

C. Epidemiologic and statistical capacity (e.g., development of epidemiologic software tools)

1. Implementation of appropriate data collection methods

2. Data linkage and analysis

3. Integration of state information and surveillance systems and dissemination of information

4. Development and conduct of training activities (e.g., conferences, distance learning)

5. Coordination of program activities between states and regions

D. Collaborate with states and other appropriate agencies (e.g., national organizations, other federal agencies) to develop standardized, national guidelines for reporting and investigation of disease suspected or confirmed to be caused by bioterrorism, other infectious disease outbreaks, and other public health threats and emergencies.

E. Develop criteria outlining laboratory results that should be reported to health departments or investigated further (e.g., specific agents, unusual isolates, or initial microbiologic findings that might be suspicious). Disseminate these criteria to microbiologists.

F. Adopt and disseminate CDC standards for integration of health information and surveillance systems, including specifications for the following: data elements, common user interfaces for CDC-supported systems, shared information system architecture and software components, secure data transmission over the Internet, and statistical methods for data analysis and outbreak detection.

G. If research involving human subjects should be conducted during the project period, and CDC scientists are co-investigators in that research, CDC will help develop a research protocol for IRB review by all institutions participating in the project. The CDC IRB will review and approve the protocol initially and on an annual basis (at least) until the research project is completed.